IN THE CLAIMS

Please amend the claims as follows:

1-8. (Cancelled)

9. (Currently Amended) A processing apparatus for forming a film using atomic layer deposition (ALD), comprising:

a process chamber, an interior of the process chamber being maintained airproof so as to be exhausted to a vacuum;

a gas supply section provided to said process chamber for supplying a predetermined gas into said process chamber; and

an exhaust opening provided to said process chamber so as to face said gas supply section and connected to exhaust means for exhausting [[an]] the interior of said process chamber,

wherein said process chamber has a gas flow passage extending from said gas supply opening to said exhaust opening, and wherein said gas flow passage has a transverse cross-sectional area with at least a width that decreases in inverse proportion to a distance from said gas supply opening along said gas flow passage.

10. (Currently Amended) The processing apparatus according to Claim 9,

wherein said gas supply opening is connected to gas supply means for alternately supplying plural species of gases into said process chamber.

11. (Cancelled)

12. (Currently Amended) The processing apparatus according to claim 10,

wherein said process chamber is structured such that a thickness of a boundary layer is approximately constant, said boundary layer being formed when said gases are supplied into said process chamber, on a wall of said process chamber that extends along a direction of flow of said gases.

13. (Currently Amended) The processing apparatus according to claim 10,

wherein said process chamber is structured such that a thickness of a boundary layer is approximately constant, said boundary layer being formed when said gases are supplied into said process chamber, on a substrate placed in said process chamber approximately parallel with a direction of flow of said gases.

14. (Currently Amended) A processing apparatus for processing a substrate using atomic layer deposition (ALD), said processing apparatus comprising:

a process chamber having a bottom wall configured to support the substrate, an interior of the process chamber being maintained airproof so as to be exhausted to a vacuum;

a gas supply opening provided to said process chamber and connected to gas supply means for alternately supplying plural species of gases into said process chamber; and

an exhaust opening provided to said process chamber and connected to exhaust means for exhausting [[an]] the interior of said process chamber,

wherein said process chamber has a cross-section that has an approximately triangular shape as seen from a direction approximately perpendicular to said bottom wall.

15. (Currently Amended) A method for processing a substrate placed in a process chamber, an interior of the process chamber being maintained airproof so as to be exhausted to a vacuum, using atomic layer deposition (ALD), by alternately supplying plural species of

gases into said process chamber from a gas supply opening and switching atmosphere in said process chamber, said method comprising:

supplying, alternately, each of said plural species of gases ~~a predetermined gas~~ into said process chamber from said gas supply opening; and

causing each of said ~~predetermined gas~~ plural species of gases supplied in said gas supplying to flow in said process chamber in a manner that said gas flows along a gas flow passage having a transverse cross-sectional area with at least a width that decreases in inverse proportion to a distance from said gas supply opening.

16. (Currently Amended) The processing method according to claim 15,

wherein in said gas flow, a boundary layer having an approximately constant thickness is formed on a wall of at least one of said process chamber and said substrate, along a direction of flow of said gas.

17. (Currently Amended) The processing apparatus according to claim 9,

wherein said gas supply section includes a plurality of gas supply holes arranged approximately parallel with a direction of width of said process chamber.

18. (Previously Presented) The processing apparatus according to claim 17,

wherein said gas supply section includes a gas diffusion section connected to said gas supply holes.

19-20. (Cancelled)

21. (Currently Amended) The processing apparatus according to claim 9,

wherein a boundary layer having an approximately constant thickness is formed on a inner wall of said process chamber along a direction of flow of said gas.

22. (Previously Presented) The processing apparatus according to claim 9, wherein a height of said transverse cross-sectional area remains constant along said gas flow passage.

23. (Cancelled)

24. (Currently Amended) The processing apparatus according to claim 9, wherein said process chamber has a bottom surface configured to support a substrate for processing within said chamber, and wherein said chamber has a cross-section that has an approximately triangular shape as seen from a direction approximately perpendicular to said bottom wall.

25. (Currently Amended) The processing apparatus according to claim 24, wherein:

said exhaust opening is provided on said process chamber at a location on a vertex portion of the approximately triangular shaped cross-section of said process chamber;

said gas supply opening is provided on said process chamber at a location on a side of the approximately triangular shaped cross-section of said process chamber that is opposite to said vertex portion; and

said gas supply opening extends along substantially an entire length of the side of the approximately triangular shaped cross-section of said process chamber that is opposite to said vertex portion.

26. (Currently Amended) The processing apparatus according to claim 14, wherein:

said exhaust opening is provided on said process chamber at a location on a vertex portion of the approximately triangular shaped cross-section of said process chamber; and

said gas supply opening is provided on said process chamber at a location on a side of the approximately triangular shaped cross-section of said process chamber that is opposite to said vertex portion.

27. (Currently Amended) The processing apparatus according to claim 26, wherein said gas supply opening extends along substantially an entire length of the side of the approximately triangular shaped cross-section of said process chamber that is opposite to said vertex portion.

28. (Previously Presented) The processing method according to claim 15, wherein a height of the transverse cross-sectional area remains constant along the gas flow passage.

29. (Cancelled)

30. (Currently Amended) The processing method according to claim 15, wherein:

the process chamber has a bottom surface supporting the substrate within the process chamber;

the process chamber has a cross-section that has an approximately triangular shape as seen from a direction approximately perpendicular to the bottom wall;

the process chamber has an exhaust opening that is provided on the process chamber at a location on a vertex portion of the approximately triangular shaped cross-section of the process chamber; and

the gas supply opening is provided on the process chamber at a location on a side of the approximately triangular shaped cross-section of the process chamber that is opposite to the vertex portion.

31. (Currently Amended) The processing method according to claim 30, wherein the gas supply opening extends along substantially an entire length of the side of the approximately triangular shaped cross-section of the process chamber that is opposite to the vertex portion.

32. (New) The processing apparatus according to claim 9, wherein said film to be formed is TiN or any one kind of $Al_2O_3$, $ZrO_2$, TaN, $SiO_2$, SiON, WN, WSi and $RuO_2$, and is formed from said plural species of gases alternately supplied.

33. (New) The processing apparatus according to claim 9, wherein said plural species of gases alternately supplied are $TiCl_4$ and $NH_3$, or any one of $TaBr_5$, Ta $(OC_2H_5)_5$, $SiCl_4$, $SiH_4$, $Si_2H_6$, $SiH_2C1_2$, and $WF_6$ instead of $TiCl_4$ and any one of $N_2$, $O_2$, $O_3$, NO, $N_2O$, $N_2O_3$, and $N_2O_5$, instead of $NH_3$.

34. (New) The processing apparatus according to claim 14, wherein a film is formed from said plural species of gases alternately supplied, such as TiN or any one kind of $Al_2O_3$, $ZrO_2$, TaN, $SiO_2$, SiON, WN, WSi, and $RuO_2$.

35. (New) The processing apparatus according to claim 14, wherein said plural species of gases alternately supplied are $TiC1_4$ and $NH_3$, or any one of $TaBr_5$, $Ta(OC_2H_5)_5$,

$SiCl_4$, $SiH_4$, $Si_2H_6$, $SiH_2C1_2$, and $WF_6$ instead of $TiC1_4$, and any one of $N_2$, $O_2$, $O_3$, NO, $N_2O$, $N_2O_3$, and $N_2O_5$ instead of $NH_3$.

36. (New) The processing method according to claim 15, wherein a film is formed from said plural species of gases alternately supplied, such as TiN or any one kind of $Al_2O_3$, $ZrO_2$, TaN, $SiO_2$, SiON, WN, WSi, and $RuO_2$.

37. (New) The processing method according to claim 15, wherein said plural species of gases alternately supplied in said gas supplying are $TiC1_4$ and $NH_3$, or any one of $TaBr_5$, $Ta(OC_2H_5)_5$, $SiC1_4$, $SiH_4$, $Si_2H_6$, $SiH_2C1_2$, and $WF_6$ instead of $TiC1_4$ and any one of $N_2$, $O_2$, $O_3$, NO, $N_2O$, $N_2O_3$, and $N_2O_5$ instead of $NH_3$.